What is claimed is:

1. A singing voice-synthesizing method comprising the steps of:

inputting phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, and singing length information representative of a singing length, in timing earlier than the singing-starting time point, for a singing phonetic unit including a sequence of a first phoneme and a second phoneme;

generating a phonetic unit transition time length formed by a generation time length of the first phoneme and a generation time length of the second phoneme, based on the inputted phonetic unit information;

determining a singing-starting time point and a singing duration time of the first phoneme and a singing-starting time point and a singing duration time of the second phoneme, based on the generated phonetic unit transition time length, the inputted time information and singing length information; and

starting generation of a first singing voice and a second singing voice formed by the first phoneme and the second phoneme at the singing-starting time point of the first phoneme and the singing-starting time point of the second phoneme, respectively, and continuing generation of the first singing voice and the second singing voice for the singing duration time of the first phoneme and the singing duration time of the second phoneme, respectively.

2. A singing voice-synthesizing method according to claim 1, wherein the determining step includes setting the singing-starting time point of the first phoneme to a time point earlier than the singing-starting time point represented by the time information.

3. A singing voice-synthesizing apparatus comprising:

an input section that inputs phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, and singing length information representative of a singing length, in timing earlier than the singing-starting time point, for a phonetic unit including a sequence of a first phoneme and a second phoneme;

a storage section that stores a phonetic unit transition time length formed by a generation time length of the first phoneme and a generation time length of the second phoneme;

a readout section that reads out the phonetic unit transition time length from said storage section based on the phonetic unit information inputted by said input section;

a calculating section that calculates a singing-starting time point and a singing duration time of the first phoneme, and a singing-starting time point and a singing duration time of the second phoneme, based on the phonetic unit transition time length read by said readout section and the time information and the singing length information which have been inputted by said input section; and

a singing voice-synthesizing section that starts generation of a first singing voice and a second singing voice formed by the first phoneme and the second phoneme at the singing-starting time point of the first phoneme and the singing-starting time point of the second phoneme calculated by said calculating section, respectively, and continuing generation of the first singing voice and the second singing voice for the singing duration time of the first phoneme and the singing duration time of the second phoneme calculated by said calculating section,

respectively.

4. A singing voice-synthesizing apparatus according to claim 3, wherein said input section inputs modifying information for modifying the generation time length of the first phoneme, and wherein said calculating section modifies the generation time length of the first phoneme in the phonetic unit transition time length read by said readout section according to the modifying information inputted by said input section, and then calculates the singing-starting time point and the singing duration time of the first phoneme and the singing-starting time point and the singing duration time of the second phoneme, based on the phonetic unit transition time length including the modified generation time length of the first phoneme.

5. A singing voice-synthesizing method comprising the steps of:

inputting phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, and singing length information representative of a singing length, for a singing phonetic unit;

generating a state transition time length corresponding to a rise portion, a note transition portion, or a fall portion of the singing phonetic unit, based on the inputted phonetic unit information; and

generating a singing voice formed by the phonetic unit, based on the phonetic unit information, the time information, and the singing length information which have been inputted, the generating step including adding a change in at least one of pitch and amplitude to the singing voice during a time period corresponding to the generated state transition time length.

6. A singing voice-synthesizing apparatus comprising:

an input section that inputs phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, and singing length information representative of a singing length, for a singing phonetic unit;

a storage section that stores state transition time length corresponding to a rise portion, a note transition portion, or a fall portion of the singing phonetic unit;

a readout section that reads out the state transition time length from said storage section based on the phonetic unit information inputted by said input section; and

a singing voice-synthesizing section that generates a singing voice formed by the phonetic unit, based on the phonetic unit information, the time information, and the singing length information which have been inputted by said input section, said singing voice-synthesizing section adding a change in at least one of pitch and amplitude to the singing voice during a time period corresponding to the state transition time length read out by said readout section.

7. A singing voice-synthesizing apparatus according to claim 6, wherein said input section inputs modifying information for modifying the state transition time length, and wherein the singing voice-synthesizing apparatus includes a modifying section that modifies the state transition time length read out by said readout section based on the modifying information inputted by said input section, and wherein said singing voice-synthesizing section adds a change in at least one of pitch and amplitude to the singing voice during a time period corresponding to the state transition time length modified by said modifying section.

8. A signing sound-synthesizing apparatus comprising:

an input section that inputs phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, singing length information representative of a singing length, and effects-imparting information, for a singing phonetic unit; and

a singing voice-synthesizing section that generates a singing voice formed by the phonetic unit, based on the phonetic unit information, the time information, and the singing length information which have been inputted by said input section, said singing voice synthesizing section imparting effects to the singing voice based on the effects-imparting information inputted by said input section.

9. A signing sound-synthesizing apparatus according to claim 8, wherein the effects-imparting information inputted by said input section represents an effects-imparting time period, wherein the singing voice-synthesizing apparatus further comprises a setting section that sets a new effects-imparting time period corresponding to both the effects-imparting time period represented by the effects-imparting information and a second effects-imparting time period of a singing phonetic unit preceding the singing phonetic unit if the effects-imparting time period is continuous from the second effects-imparting time period, and wherein said singing voice-synthesizing section imparts effects to the singing voice during the new effects-imparting time period set by said setting section.

10. A singing voice-synthesizing apparatus comprising:

an input section that inputs phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, and singing length information representative of a

singing length, for a singing phonetic unit, in timing earlier than the singing-starting time point;

a setting section that randomly sets a new singing-starting time point, within a predetermined time range extending before and after the singing-starting time point, based on the time information inputted by said input section; and

a singing voice-synthesizing section that generates a singing voice formed by the phonetic unit, based on the phonetic unit information and the singing length information which have been inputted by said input section, and the singing-starting time point set by said setting section, said singing voice synthesizing section starting generation of the signing sound at the new singing-starting time point set by said setting section.

11. A storage medium storing a program for executing a singing voice-synthesizing method, the program comprising:

an input module that inputs phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, and singing length information representative of a singing length, in timing earlier than the singing-starting time point, for a singing phonetic unit including a sequence of a first phoneme and a second phoneme;

a phonetic unit transition time length-generating module that generates a phonetic unit transition time length formed by a generation time length of the first phoneme and a generation time length of the second phoneme, based on the inputted phonetic unit information;

a determining module that determines a singing-starting time point and a singing duration time of the first phoneme and a singing-starting time point and a singing duration time of the second phoneme, based on the

generated phonetic unit transition time length, the inputted time information and singing length information; and

a singing voice-generating module that starts generation of a first singing voice and a second singing voice formed by the first phoneme and the second phoneme at the singing-starting time point of the first phoneme and the singing-starting time point of the second phoneme, respectively, and continuing generation of the first singing voice and the second singing voice for the singing duration time of the first phoneme and the singing duration time of the second phoneme, respectively.

12. A storage medium storing a program for executing a singing voice-synthesizing method, the program comprising:

an input module that inputs phonetic unit information representative of a phonetic unit, time information representative of a singing-starting time point, and singing length information representative of a singing length, for a singing phonetic unit;

a state transition time length-generating module that generates a state transition time length corresponding to a rise portion, a note transition portion, or a fall portion of the singing phonetic unit, based on the inputted phonetic unit information; and

a singing voice-generating module that generates a singing voice formed by the phonetic unit, based on the phonetic unit information, the time information, and the singing length information which have been inputted, the singing voice-generating module adding a change in at least one of pitch and amplitude to the singing voice during a time period corresponding to the generated state transition time length.